

## CLAIMS

1. A high-pressure metal halide discharge lamp, characterized in that it comprises, as filling, only zinc, a halogen and a rare gas.
2. A discharge lamp as claimed in claim 1, characterized in that it comprises, as  
5 filling, only zinc, iodine and a rare gas.
3. A discharge lamp as claimed in claims 1 and 2, characterized in that the overall amount of the atomic halogen is between 1 and 30  $\mu\text{mole}/\text{cm}^3$ , the overall amount of zinc is more than 1  $\mu\text{mole}/\text{cm}^3$ , and the zinc/atomic halogen molar ratio is  $> 0.5$ .  
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4. A discharge lamp as claimed in claim 3, characterized in that the zinc/atomic halogen molar ratio is  $> 1$ .
5. A discharge lamp as claimed in claims 1 to 4, characterized in that the  
15 coupling-in of energy takes place without electrodes in the radio-frequency range (0.1 – 1000 MHz) or in the microwave range ( $> 1000$  MHz).
6. A discharge lamp as claimed in claims 1 to 4, characterized in that the coupling-in of energy takes place by means of metal electrodes.  
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7. A discharge lamp as claimed in claims 1 to 6, characterized in that it additionally comprises a calcium halide, with the overall amount of calcium being at least 1  $\text{nmole}/\text{cm}^3$ .
- 25 8. A discharge lamp as claimed in claims 1 to 7, characterized in that the lamp tube consists of quartz, aluminum oxide, or yttrium-aluminum garnet.